Biological Assessment/Evaluation (BE) and Effects Analysis for
Proposed, Endangered, Threatened, and Sensitive (PETS) Plants

East Face Vegetation Management Project

Wallowa-Whitman National Forest
La Grande and Whitman Ranger Districts

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SUMMARY AND CONCLUSION:

There are no known occurrences for any Threatened, Endangered or Proposed plant species. No plants or habitat were located during surveys within the project analysis area. There will be **no direct, indirect or cumulative effect** to any proposed, threatened, or endangered plant species from project implementation, since the species are not present .

There will be no impact to the sensitive species *Barbilophozia lycopoidiodes*, *Campylium stellatum*, *Helodium blandowii*, *Hydnotrya michaelis* and *Tomentypnum nitens*. These plants occur within pond edges or other wet areas where there will beno activities. N**o impact**; designated as an **Area – to – Protect**.

Botrychium species (*B. pedunculosum* and *B. montanum*) are known to occur within the East Face Vegetation Management project area. Additional locations for *Botrychium montanum* were discovered during botanical surveys for the East Face project. There will be **no impact** to sites from project activities. All sites will be identified as an **Area – to – Protect**.

There **may be impacts to habitat** (MIIH) or to the coniferous species *Pinus albicaulis*, however, the silviculture treatments for these stands are designed to restore and protect the species. Stands that are identified as having mature whitebark pine will be cleared around. It is anticipated that the treatments will be **beneficial** to the species in the long run by reducing potential for competition and vulnerability to insects.

1. INTRODUCTION

This Biological Evaluation (BE) analyzes effects or impacts from the proposed action and alternatives to plants listed threatened or endangered, or proposed for listing, and Forest Service sensitive plant species. A BE is prepared for any planned, funded, executed, or permitted programs and activities for possible effects to proposed, threatened, endangered, or sensitive (TES) species. The BE is the means of conducting the review and documenting the findings (FSM 2672.4). The objectives of the BE are to:

1) ensure that Forest Service actions do not contribute to the loss of viability of any native or desired non-native plant animal species or contribute to trends toward Federal listing of any species;
2) comply with the requirements of the Endangered Species Act that actions of Federal agencies not jeopardize or adversely modify critical habitat of Federally listed species; and
3) provide a process and standard by which to ensure that threatened, endangered, proposed, and sensitive species receive full consideration in the decision making process

2. PROJECT AREA (location & description)

Project area LOCATION: The 47,636 acre East Face analysis area is located approxiamtely 12 miles southwest of La Grande, in Union and Baker Counties, Oregon. Over 99 % of the project area is located on United States Forest System lands, with the remaining acres under the Bureau of Land Management.

The legal location for the East Face Vegetation Management Project is as follows:

Township 4 South	Range 38 East	Sections: 4, 5, 8, 9, (16)
Township 5 South	Range 38 East	Sections: 7, 8, (9), 16, 17, 18, 19, 20, 21, (28), 29, 30, 31, and 32
Township 5 South	Range 37 East	Sections: (11), 12, 13, (14), (23), 24, 25, 26, (27), (33), and (34), 35 36
Township 6 South	Range 38 East	Sections: 4, 5, (6), (7), (8 & 9-EWA),17, 19, (20), 29, 30, and 31, 32
Township 6 South	Range 37 East	Sections: 1,2,3,4,5,(7), 8, 9, 10, 11, 12, & 13, 14, 15, 16, 17, 18, (19), 20, 21, 22, 23, 24, 25, (26) 27, 28, 29, 30, 31, 32, 33, 34, 35 & 36
Township 7 South	Range 36 East	Sections: 5 & 6, (12), (13) & 24
Township 7 South	Range 37 East	Sections: 1, 2, 3, 4, 5, 6, 7, 8, 9,(10), (11)and ??12,

The project area occurs primarily within the North Powder River (1705020305) and Powder River – Wolf Creek (1705020306) Watersheds of the La Grande and Whitman Ranger Districts of the Wallowa -Whitman National Forest. The following table displays the subwatersheds and acreage within the East face project area.

Table 1. Watersheds and subwatershed acres in analysis area

Watershed Name / Number	Subwatershed Name / Number	SWS Total Acres	FS acres within SWS	PROJECT AREA Acres in EastFace	TEPS Plants
Ladd Creek / 1706010406	**Upper Ladd Creek / 170601040601**	**12,929**	2,355	**2,256**	**N / A**
Powder River – Wolf Creek / 1705020306	**Jimmy Creek / 170502030603**	**26,721**	0	**165 BLM**	**N / A**
	Upper Wolf Creek / 170502030602	**19,470**	14,423	**14,034**	***BOMo PIAL***
Grande Ronde River – Beaver Creek / 1706010403	**Upper Beaver Creek / 170601040301**	15,778	**15,454**	**3,406**	***Bomo Pial***
	Jordan Creek / 170601040303	16,376	**6,044**	**0.13**	**N / A**
North Powder River / 1705020305	**Lower Anthony Creek / 170502030504**	12,480	**12,480**	**8,575**	**N / A**
	Upper Anthony Creek / 170502030503	14,339	**14,339**	**14,292**	***Bomo Pial BALY***
	Middle North Powder River / 170502030502	17,398	**12,078**	**4,298**	***Bomo Pial***
	Lower North Powder River / 1705720030505	**16,646**	**62**	**62**	**N/A**
Upper Grande Ronde River / 170601010401	**Tanner Gulch – Grande Ronde / 170601040101**	**15,245**	**15,245**	**528**	**N/A**
North Fork John Day / 1707020201	**Baldy Creek – North Fork John Day River / 170702020101**	**17,426**	17,097	**6.3**	**N/A**

There are a number of geogragraphic and topograhical features which provide potential habitat conditions for sensitive plants within the project area. The area is divided by many creeks, generally flowing northeast or southeast, creating south and north-facing slopes. Major streams within the project area include: Ladd Creek, East Fork Clear Creek, West Fork Clear Creek, North Fork Wolf Creek Metzler Creek, Second Creek, Third Creek, Wolf Creek, Elkhoron Creek, Dutch Creek, North Fork Anthony Creek, Anthony Creek, Webfoot Creek, Indian Creek, Antone and Little Antone Creeks. Other riparian areas include springs, seeps, wallows, water bodies (i.e. lakes / ponds / bogs) intermittent streams, swamp / marsh and wet meadows.

Other topograhical features within the Eastface project include upland features including cliffs, rocky openings and upland coniferous forest.

The main roads through the East Face project area include: Forest Service Roads 7300, 4300, 4320 and 4315.

Project area DESCRIPTION: The following section depicts the general conditions reported for resouces within the project area. A variety of past activities and / or natural disturbance events that

have determined the existing conditions within the East Fast analysis area are briefly discussed.

VEGETATION: GIS reports generated for the the Eastface planning area indicate timbered stands are classified within the following major biophysical environmental groups:

Thirty seven percent (16,055 acres) of the forested acres within the Eastface project area belong to the Cold Upland Forest potential vegetation group.

Forty three percent (19,033 acres) of the forested acres within the Eastface project area belong to the Moist Upland Forest potential vegetation group.

Twenty percent (8,903 acres) of the forested acres within the Eastface project area belong to the Dry Upland Forest potential vegetation group.

Management activities that have most recently taken place within the Eastface analysis area include Black Bark Salvage, Dutch/Wolf, High Ham, Isham, Kutty Sark, and Wolf LP timber projects.

FUELS: Fuel conditions have been influenced by past management including wildfire suppression, insects and disease. Accumulation of dead and down fuels within forested stands have led to a high wildfire occurrence rate with records indicating numerous smaller files and several large fires over the last 40 years.

Fire Regime Condition Class (FRCC) reflects the current conditions' degree of departure from modeled reference conditions for two main components of ecosystems:

Table 2. Fire regime condition class (FRCC)

Per Cent Fire Regime / Condition Class within Project area		
Fire Regime I - 4,951 acres	Condition Class 1 Condition Class 2 Condition Class 3	10 % 1 % 20 %
Fire Regime – II - 264 acres	Condition Class 1 Condition Class 3	1 % < 1 %
Fire Regime – III - 6,693 acres	Condition Class 1 Condition Class 2	28 % 15 %
Fire Regime – IV - 3,646 acres	Condition Class 1 Condition Class 2 Condition Class 3	8 % 10 % 5 %
Fire Regime – V - 10 acres	Condition Class 1 Condition Class 2 Condition Class 3	< 1 % 0 % 0 %
Fire regime (fire frequency and severity) and associated vegetation		
Fire Regime I – All ponderosa pine types; dry Douglas-fir/pinegrass and grand fir/pinegrass. 0 – 35 year fire return interval; LOW SEVERITY **Fire Regime II** –Grassland; 0 – 35 year fire return interval; stand replacing / HIGH SEVERITY. **Fire Regime III** –Mixed conifer. 35 – 200 + year fire return interval; MIXED SEVERITY. **Fire Regime IV** – Lodgepole pine, larch, spruce. 35 – 200+ year fire return interval; stand replacing / HIGH SEVERITY **Fire Regime V –** Wet meadows, discontinuous grass scabs on ridge tops; > 200 years; MIXED SEVERITY		
Condition Class 1 - Ecosystems with a low departure (< 33 %) **Condition Class 2** – moderately altered (33 – 66 % from the reference conditions) **Condition Class 3** – ecosystems with a high departure (> 66%) from the reference conditions.		

FIRES: The East Face analysis area has a fire occurrence rate above that of the WWF. The project area had 131 documented ignitions from 1970 through 2012. Ninety eight percent of the fires have been contained within

24 hours or less at less than 10 acres. Refer to the following tables for fire statistics.

Table 3. Large Fire History

Large fire history within or adjacent to the Project Area			
Fire Name	**Fire Year**	**Fire Type**	**Total fire acres**
Red Mt.	2006	Active Crown Fire	1000
Bear	1990	Active Crown Fire	453
Tanner Gulch	1989	Active Crown Fire	3984
Anthony Creek	1960	Active Crown Fire	15023
Dave Wyland	1950	Active Crown Fire	776
Fire 10	1910	Unknown	44659
Fire 17	1910	Unknown	957

GRAZING: The project area contains two range allotments; Indian Crane (20,712 ac) and Lobo. The LOBO grazing allotment is an ongoing cattle allotment, located primarily within the northern half of the Eastface project area boundary (15,511 of 15,664 acres). The Indian Crane Cattle Allotment has been vacant, with no plans to restock within the next five years.

3. EASTFACE PROJECT DESCRIPTION

The no action and five action alternatives were developed and analyzed for the East Face Vegetation Management Project and are summarized below.

Alternative One - is the No Action alternative, no mechanical or prescribed fire treatments would occur.

Alternative Two – focuses on the Cohesive Wildfire Strategy (CWS) to restore and maintain landscapes, create fire adapted communities and improve fire response times. Treatments are designed to reduce surface and ladder fuels in strategic locations which include La Grande Municipal watershed boundary, ridge tops, roads, recreation areas and residences. Use of prescribed fire across boundaries in the Elkhorn wildlife area and onto BLM lands is included. (See NEPA document and data tables for specifics.)

Alternative Three – addresses the general goals of the CWS while focusing on key issues related to the retention of old growth, road access, landscape connectivity and retention of unroaded areas.

Alternative Four – designed to meet the objectives of the Cohesive Wildfire Strategy, but focuses the most on commercial and non-commercial treatments to reduce fuels in Priority 1 treatment areas. Designated, designed to treat within wildland urban interface areas, along private land areas and adjacent roadless and wilderness areas.

Alternative Five – focuses on optimizing commercial removal of woody materials while meeting the goals of the CWS. Treatments to reduce surface and ladder fuels and canopy bulk densities are strategically located through the project area. Overstocked areas within priority areas 2 and 3 include biomass removal opportunities under this alternative.

Activities proposed under the action alternatives will include harvest treatments, mechanical fuels

reduction work, pre-commercial thinning, prescribed burning, and road construction. These activities are described in more detail in the EA. See Table 4. (below) for Alternative elements.

Table 4. Summary of Proposed Actions for each Alternative.

Alternative Elements		Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Project Area Boundary (PAB) Acres 46,412 acres USFS & 1,224 acres Vale BLM		0	47,636			
Total Harvest and Noncommercial Treatment Acres		0	17,098	13,654	16,500	18,036
Total Acres Treated by Prescription Type (Commercial) *HPO includes treatments part of HIM/HPO and HTH/HPO Units	HFU	0	245	139	155	245
	HIM	0	2,200	1,198	1,255	2,868
	HPO*	0	143	-0-	0	143
	HPR	0	43	43	38	43
	HSAor HAS	0	210	62	122	210
	HSH	0	318	0	120	318
	HTH	0	3,563	2,437	1,154	3,816
	WFH – Biomass Removal	0	0	0	0	391
	PCT – Biomass Removal	0	0	0	0	2,169
Total Harvest Treatment Acres		0	6,772	3,879	2,844	10,221
Total Acres Treated by Prescription Type (Noncommercial)	PCT	0	3,447	3,372	6,682	1,277
	WFH	0	5,184	4,658	5,184	4,793
	WFM	0	1,745	1,745	1,700	1,745
	FFU	0	0	0	90	0
Total Noncommercial Treatment Acres		0	10,376	9,775	13,656	7,815
Post-Treatment Activities						
Post-Treatment Activities (Acres)	Precommercial Thinning	0	195	116	26	195
	Grapple Pile/Slashbuster	0	10,704	6,842	8,568	8,083
	Handpile & Burn	0	2,120	3,090	4,099	3,929
	Planting	0	257	0	80	257
	Whipfelling	0	6,682	3,879	2,834	7,621
	Burning - Site Preparation	0	127	0	26	127
	Jackpot	0	3,835	2,820	2,823	4,150
Prescribed Fire (Acres)	Total Burn Block Area	0	6,685	6,043	6,643	6,685
Treatments within RHCAs (Acres)	Precommercial Thinning Treatments	238	225	238	45	238
	Hand Fuel Reduction Treatments	754	612	754	746	754
Yarding Systems (Acres)	Ground Based	0	5,294	3,239	2,092	8,350
	Skyline Yarding	0	1,094	416	419	1,450
	Helicopter	0	333	224	333	421
Road Work (Miles)	Reconstruction	0	53	39.3	27.8	61.6

Alternative Elements		Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
	Temporary Roads (Total)	**0**	**12.62**		**2.62**	**14.71**
	Miles on Existing	**0**	**6.01**	**0**	**0.67**	**6.57**
	Miles on New	**0**	**6.01**		**1.95**	**8.14**
	Miles of Closed Roads to be Opened	**0**	**107**	**66.9**	**38.6**	**122.7**
Enhancement / Safety Work	**Danger Tree Removal**	No	YES	YES	YES	YES
	Culvert Replacement for Fish Passage	No	YES	YES	YES	YES
	Whitebark Pine Restoration	No	YES	YES	YES	YES
	Aspen Enhancement	No	YES	YES	YES	YES
Harvest Volume in Million Board Feet (MMBF)	**Sawtimber Volume**	**0**	**16.4**	**9.3**	**6.6**	**18.8**
	Non-Saw Volume	**0**	**5.5**	**3.2**	**2.4**	**7.5**
Fuelwood Removal	**Total Volume (MMBF)**	**0**	**21.9**	**12.5**	**9.0**	**26.3**

4. AFFECTED ENVIRONMENT

This section discusses the methods used in determing surveys, the potential for plants to occur within the project area and previous information on file.

Methodology For Conducting Botanical Surveys

A pre-field assessment for determining the presence potential of sensitive plant species consist of a review of aerial photographs, previous survey information and results, existing condition and knowledge of the area and of the (individual plant) species. Survey designs for species vary both between and within taxonomic groups.

Guidelines for conducting sensitive plant surveys are based upon a number of features including probability of occurrence, species habitat requirements, flowering characteristic and blooming periods.

The level of survey intensity is determined by assessment of the probability of occurrence and the level of habitat disturbance. Factors include potential for impacts, which considers the type of project activity; plant community types and special habitats; vegetation density, species visibility and time of year.

The five indicators used for assessing the sensitive plant resources within the Eastface Project area consist of the following:

1 - The number of, and which species occur
2 - The number of sites, by species
3 - The number of individual plants within each occupied site
4 - The acres occupied , by species and
5 - The acres of potential habitat.

Existing Condition Information for Botanical Resources – Pre-Field:

A pre-field review of survey results and information was conducted for the project area. The Forest Geographic Information System (GIS), rare plant data base (NRIS), and Forest Service District files were examined to identify whether any threatened, endangered or sensitive (TES) plants or potential habitat are known in or near the analysis area boundary.

The Eastface project area boundary will be the analysis area for the TEPS (Threatened, Endangered, Proposed and Sensitive) botanical resources. Information from the GIS (Geographic Information System) was utilized to determine the number and location of TEPS plant species within the project area.

Endangered and Threatened Species:

This BE evaluates the following species: 1) the Pacific Northwest Region Regional Forester's Sensitive Species list (December 9, 2011) http://www.fs.fed.us/r6/sfpnw/issssp/agency-policy) for plant species known or with potential to occur on the Wallowa-Whitman National Forest (Appendix A); and 2) threatened endangered or proposed species as indicated by the U.S. Department of Interior, Fish and Wildlife Service (USDI F&WS), Oregon Fish and Wildlife Office website. The site references the list of threatened and endangered species that may occur in selected Oregon counties. One listed plant species (Howell's spectacular thelypody) *Thelypodium howellii* ssp. *spectabilis,* a threatened plant, and one candidate species (whitebark pine) *Pinus albicaulis* are listed for Union County.

There are no occurrences or habitat on National Forest System lands for Thelypodium howellii ssp. *Spectabilis,* a federally listed threatened plant species which may occur within Union County, Oregon. This species is known to occur in relatively moist, alkaline meadows in or adjacent to valley bottoms. Populations occur on private and county lands near North Powder, Haines and Baker City (USFWS 2002) in Baker County.

Because there is no habitat or listed plant species in the analysis area, the project would have **no effect** to Howell's spectacular thelypody. Federally listed plants will not be discussed any furthere and the remaining document addresses only those species from the Region – 6 Sensitive plant list and the candidate species whitebark pine.

Region 6 - Sensitive Plant Species:

The following eight sensitive plant species occur at numerous locations within the East Face project area, as indicated below:

Sensitive plant species:	**Number of Sites previously locatied within the Project Area**
Barbilophozia lycopodioides	*2*
Botrychium montanum	*12*
Botrychium pedunculosum	*2*
Campylium stellatum	*1*
Hydnotria michaelis	*1*
Pinus albicaulis	*18*
Tomentypnum moss	*1*
Utricularia minor	*1*

Field Reconnaissance And Results For Previous Projects:

Botanical surveys have been conducted for previous projects which completely or partially overlap the proposed East Face project area. Survey records were reviewed to determine survey and intensity level, and to prioritize those areas which may contain potential TEPS habitat or occurrences.

Existing information which is on file for botanical surveys conducted by forest service personnel and contractors include:

Table 5. Projects, date and results of botanical surveys

Project Name	Date of Botanical Surveys	Results of Botanical Surveys
Surveys for Pinus albicaulus	2012	***Pinus albicaulis*** was located and documented
Surveys for nonvascular plant species (lichens and bryophytes)	2006, 2007 and 2008	***Barbaliphozia lycopoidiodes*** was located and documented
Forest Service Road 73 Improvement/ Reconstruction	1999, 2002 and 2003	***Botrychium*** species were located and documented
Gorham TSI	2000	***Botrychium*** species were located and documented
High Ham	1997	***Botrychium*** species were located and documented
Smaller, miscellaneous projects with surveys include invasive weed treatments, thinning (TIS) units and projects such as FloodWater Flats Recreational Residences were completed and documented in Biological Evaluations located in district files.		
FloodWater Flats Recreational Residences / special use permit	1999	Sensitive ***Botrychium*** species located
During additional survesy for Floodwater Flats Recreational residences (2001,2002 and 2006) sensitive ***Botrychium*** were found along the wet meadow adjacent to some of the project activities (burn piles, structures, etc) conducted.		

Previous surveys within the project area were conducted at the appropriate time and intensity, and documentation including survey records and aerial photos are on file at the district office.

Additional projects in the geographic area, for which botanical survey records can not be located in are identified below:

Table 6. Projects and date of implementation for which no survey records could be found.

Project Name	Date of Project Implementation	Status of Botanical Surveys
Gorham	2002	Unable to locate documents
Black Bark Salvage	2000	
Dutch / Wolf	2002	
Finish	1998	
Hazard Tree III	1996	
Wolf LP	1995	
Dug Post	1995	
Kuttysark	1994	
Fire Bug	1993	
Anthony LP	1992	
High Mtn. wood sale	1992	
ISHAM	1992	UNKNOWN
Webfoot Salvage	1992	Unable to locate documents
Aurelia LP	1991	Prior to survey records
Jordan	1991	
Bad Whiskey	1990	
Shaw	1990	

Project Name	Date of Project Implementation	Status of Botanical Surveys
West Clear	1986	
Mann Ridge	1983	
Antone Creek	1980	
Indian Creek	UNKNOWN	UNKNOWN

Other project surveys included invasive plants, thinning units and small, miscellaneous projects. A mix of intuitive controlled and intensive surveys were completed and are documented in the project biological evaluations located in district files.

Based on present available information, it was determined that the analysis area does contain potential TES plant habitat which may be suitable for up to 25 species. Table 7 includes an assessment as to the likelihood of these species occurring within the project area boundary based on observations of the analysis area, and previous survey experience.

Results From Previous Project Surveys

The Eastface project area boundary will be the analysis area for the TEPS (Threatened, Endangered, Proposed and Sensitive) botanical resources. The pre-field assessment identified 25 sensitive plant species that could potentially occur within the analysis area based on general habitat descriptions. District records, aerial photos and database were examined to determine the potential for occurrence and habitat of these species. Information from the GIS (Geographic Information System) was utilized to determine the number and location of TEPS plant species within the project area.

Sensitive plant species were discovered within the project area under previous plant surveys and resulted in the following:

Botanical surveys conducted within the vicinity of the project area during 1997, 1999, 2000, 2006, 2007 and 2008 resulting in the documentation of three currently listed sensitive *Botrychium* species from the Region – 6 Forester's Sensitive plant list; and one site for Utricularia minor.

Surveys for special status lichens and bryophytes were conducted under a contract during 2006, 2007 and 2008 resulting in the discover of *Barbaliphozia lycopodioides, Campylium stellata, Helodium blandowii and Tomentypnum nitens* within the project area.

Species-specific surveys for *Pinus albicaulis* (whitebark pine) conducted within the project area during 2012 resulted in the location and documentation of whitebark pine "stands" identified for restoration treatments.

Based upon the initial pre-field assessment, aerial photographs and knowledge of the proposed project area and sensitive plant and occurrence, it was concluded that potential habitat for sensitive plant species does exist within the East Face analysis area. Sensitive plant species that could potentially occur within the analysis area based on general habitat descriptions and include the following 25 species.

Table 7. Pre-field species checklist for East Face analysis area

Scientific name	Common name	Habitat summary	Pre-Field Checklist for East Face Vegetation project
Barbilophozia lycopodioides	**Maple leaved liverwort**	Peaty soil on damp ledges of rock outcrops and cliffs at higher elevations. Sites receive abundant snowfall; forest types include *Abies lasiocarpa, Picea engelmannii, Pinus contorta* and *Tsuga mertensiana* associations.	**Yes – Documented** at two locations within the East Face project area boundary, near and adjacent to Anthony Lake / Lakes. No activities will occur at either location for this species. No other sites were located**. No Impact**
Sensitive ***BOTRYCHIUM*** species		**Yes – documented**. Moist meadows, edges of ponds and lakes, grassy forests. Some species have been found under various species of conifer trees. Sandy soils, or areas moist in spring. In forested areas, often associated with queens-cup bead lily or strawberries.	
Botrychium ascendens	Upward-lobed moonwort	**Yes – documented**. A number of sites exist within the East Face Project Area Boundary. Both *B. pedunculosum* and *B. montanum* have been located during previous survey. *B. montanum* occurs at 15 locations within the project area boundary. No activities will take place at 6 of the known site locations. Bomo 0011 is located along Beaver Creek where no activities will occur, and site will be designated as and "Area To **Protect".** Bomo 0011 is located along Beaver Creek between Units # 59 and # 60; and Bomo 0012 is within Unit # 55 along Elk Horn Creek. Bomo 0065 is located near High summit springs, just south of Unit # 61. Bomo 0009 is within Unit # 146, within a tributary to the North Fork Wolf Creek. Bomo 2107 is located at the same site as Bope4 0040. (see below). Bomo 0627 is located along the southern end of Unit # 311, north and along Forest Service Road 73. Bomo 0010 is located along the tributary to Wolf Creek, southwest and adjacent to Unit # 311. Bomo 2212 is located at the southern edge of Unit # 608. Stalked moonwort was located during previous surveys at two locations within the project area boundary along and immediately north of Forest Service Road 73. One site (Bope4 0040) is located along the edge of Unit # 239. Bope4 0036 is located along the 73 road and southern edge of Unit # 307. Additional habitat suitable for supporting *Botrychium* species is present within the project area boundary, especially along the streams and seepy areas. Includes Unit # 608 and within Unit # 328 along the Northern edge of Unit # 609.
Botrychium campestre	Prairie moonwort		
Botrychium crenulatum	Crenulate moonwort		
Botrychium lineare	Slender moonwort		
Botrychium lunaria	Common Moonwort		
Botrychium montanum	**Mountain grape-fern**		

Scientific name	Common name	Habitat summary	Pre-Field Checklist for East Face Vegetation project
Botrychium paradoxum	Twin-spiked moonwort	Areas having a high potential for supporting Botrychium species is loacted south of Unit # 60; at Sand Flats, NE of Webfoot Creek and Unit # 311 along the 73 road. Additional sites for *B. montanum* were located during the East Face surveys of 2014. Potential habitat identified in survey **units 78, 120, 126, 128, 142**	
Botrychium Pedunculosum	**Stalked moonwort**		
(***Botrychiuim*** - continued)			
Campylium stellatum	**Star compylium moss**	No habitat information available	**Yes** – documented. One site is located within the project area in (WFH) Unit # 311, North of the 73 road.
Carex cordillerana (syn. C. backii)	Cordilleran sedge	Dry forests and riparian woods. Mid-elevations.	**Possible.** Several populations have been discovered on the La Grande Ranger District, and the forest. None found during surveys. **No impact**
Carex retrorsa	Retrorse sedge	Swamps, wet thickets, often along streams, marshes, sedge meadows, shores of streams, ponds, and lakes. Our populations are on basalt and other volcanic derived soils.	Possible but unlikely; a previous location on Eagle Creek (Pine R.D.) has not been relocated. Species would be within riparian protective buffers. **No Impact**
Cypripedium fasciculatum	Clustered lady's-slipper	Forest, grand fir to Ponderosa pine, and warm riparian forests. Populations generally found in 60-100% shade. Ultra basic soils, granitics, schists, limestone, and quartz-diorite. Rocky to loamy soils in damp to dry sites. Seeps/springs.	Very Unlikely. Historic collection from adjacent Gold King Creek in East Eagle drainage. Has not been relocated**. No Impact**
Eleocharis bolanderi	Bolander's spikerush	Fresh, often summer-dry meadows, springs, seeps, stream margins. Wet places, low to mid-montane. In vernally wet swales. Along intermit-tent streams and moist meadows.	Very unlikely; flat, wet, grassy habitat for this species was not seen within the project area **No Impact.**
Helodium blandowii	**Blandow's feather / wetland plume moss**	Bogs and Marshes; in mountain fens, usually with calcareous ground later. Sometimes under sedges or shrubs in mires. Bogs, fens, wet meadows, and streamsides. Shady sites to full sun. Wet boggy areas, seepage areas around alpine lakes.	**Yes** – documented. Two sites are located in the geographic area of the project. One site is outside and adjacent to the west within the Tanner Gulch – Grande Ronde River – UGRR subwatershed. The other site is located at Grande Ronde Lakes recreation site within the PAB. No activities associated with the East Face project will take place at this location. **No Impact**
Hydnotrya michaelis		No habitat information available	**Yes-**documented at one site near Mud Lake. There will be **no impact** because no activities will occur there.

Scientific name	Common name	Habitat summary	Pre-Field Checklist for East Face Vegetation project
Lycopodium complanatum	Ground cedar	Dry open coniferous or mixed forest alpine slopes; coniferous forest, with thick duff. Often on rotting logs, moist forest, riparian areas. Also in meadows and on open ridge tops.	Very unlikely. This species is very rare in northeast Oregon and only one site is know to occur within the area of the Upper Grande Ronde River**. No Impact**
Pellaea bridgesii	Bridges' cliff-brake	Dry rock outcrops, granitics at moderate to higher elevations. Loose talus slopes.	Not likely. Although the species does occur on the W-WNF no habitat or sites have been identified during any surveys**. No Impact**
Phacelia minutissima	Dwarf phacelia	Moist meadow and seep edges, or on vernally wet open meadows and barren slopes. Reported to occur with aspen in other areas. Gravely, clay-loam, well-drained soils.	Unlikely. Suitable habitat was not seen; however it could occur on moderately sloping dry grass - lands with seepage areas. No activities to occur in this habitat**. No Impact**
Phlox multiflora	Many-flowered phlox	Basalt cliffs, rocky outcrops, rocky openings in dry forest. Wooded rocky areas, as well as in openings in the forest. Loose substrate rather than exposed hard rocks. Residual soils, gravels, cobbles.	**Possible** habitat, however unlikely to occur within the analysis area. Easily seen and in areas in which it occurs. There were no plants located during surveys. **No Impact**
Pinus albicaulis	**Whitebark pine**	Steep slopes and windy eposures in subalpine and alpine habitat. Often an early to mid-seral species, growing with lodgepole pine, Englemann spruce and sub-alpine fir.	**Yes – documented** at numerous locations within the south/southwest end of the project area, along both sides of the 73 road. Stands with a discernable componet of whiebark pine include: Units # 312, # 311 and # 310. Whitebark pine are also located along the 43 road and within scattered pockets of the project area. Whitebark pine occur both within and outside of proposed treatment Units.
Platanthera obtusata	Small northern bog-orchid	Mesic to wet coniferous forest, forested fens, sphagnum bogs, stream banks, tundra, moist roadsides; 0-3500 m (18). Sometimes found growing on top of rotting logs. Often with Engelmann spruce, or sub-alpine fir. Not necessarily on limestone soils.	Species prefers moist, boggy habitat that exists within the analysis area. No plants located. Unlikely to occur within areas to be affected from project activities. Not present within the analysis area. **No Impact**
Tomentypnum nitens	**Tomentypnum moss**	Swamps and bogs; elevated sites within mineral rich montane fens.	Yes – documented. Species is located at one site within the Project area boundary. No activities will take place at or near this site. **No Impact**.

Scientific name	Common name	Habitat summary	Pre-Field Checklist for East Face Vegetation project
Trifolium douglasii	Douglas' clover	Moist or mesic meadows, prairie remnants, along riparian areas and intermittent streams and in vernally wet areas. Alluvial soils, ash/clay, fine silt to sandy.	Not likely to occur. Although this species is located within the Starkey area, west of the La Grande Ranger District; it is very rare in northeast Oregon. Not present within the analysis area. **No Impact.**
Utricularia minor	**Lesser bladderwort**	Aquatic, ponds, lakes, slow moving streams.	**Yes –** documented near Unit # 311 and south of Unit # 139. No activities will occur here. **No Impact.**

After preliminary surveys, this list was re-evaluated and is represented in the table above. The nine species known or suspected to occur within the analysis area are in bold font. Other species itemized above are unlikely to exist and will not be included in the effects analysis portion of this document.

Field Reconnaissance And Results For The East Face Project:

Botanical surveys were conducted specific to the East Face Vegetation Management project during the summer of 2014. An approach to determine minimum survey requirements combines an assessment of the probability of occurrence and the level of habitat disturbance. Surveys were focused on forested habitats where ground disturbing timber removal would occur and non-forest habitats within prescribed burn blocks. Surveys were prioritized based on several criteria including proposed timber harvest units and areas with potential habitat as detected using aerial photographs and knowledge of the project area. Site-specific botanical surveys for the East Face project were conducted within the project area on:

June 11, 24, 25, 26, 30;
July 1, 2, 7, 8, 9, 10, 14, 15, 17, 23, 24, 28, 29, 30 and 31;
August 1, 4, 5, 7, 11, 13, 14, 18, 25, 26, 27 and September 1 of 2014.

The total acres surveyed within the East Face project analysis area is approximately 25 %.

Nearly 16 % of the acreage within the Dry Upland forested habitat was surveyed. Approximately 17 % of the acreage within the Moist Upland Forested Habitat was surveyed. And Roughly 13 % of the Cold Upland forested habitat was surveyed during the 2014 season.

Calculations show that 57 % of the acreage within the proposed commercial treatment timber units were surveyed at a low to moderate intensity level; Rougly 32% of the acreage within the proposed non-commercial units were surveyed.

Prescribed fire units were surveyed at a lower intensity as this activity poses a smaller risk of impacting rare plant habitats. Approximately 24 % of the acreage proposed for prescribed fire within Burn Blocks # 601 – # 608 was surveyed. Nearly 21 % of the acreage within Burn Blocks # 601 - # 612 has been surveyed. No site specific surveys were conducted within Burn Blocks # 613, # 614, # 615, # 616 or # 617. However, these areas were covered to some degree due to surveys of specific units which fall within the burn blocks.

Treatment units are scheduled to be removed with ground-based, skyline or helicopter systems.

Approximately 68 % of the harvested acres to be removed via ground-based systems were surveyed.
Approximately 30% of the sky-line treated acres were surveyed.
None of the (333 to 421) treated acres to be removed via helicopter were surveyed.

The selected survey areas were designed to be representative of the habitat within the analysis area and the proposed project activity elements. Surveys were conducted at the appropriate time and intensity. Although neither all of the proposed treatment units nor every acre within a unit were examined, the method was sufficient to determine the level of risk of impacting the target species within areas of disturbance.

The 2014 seasonal surveys within the East Face project resulted in the discovery of additional locations for sensitive *Botrychium* species from the Region – 6 Sensitive plant list. Four of the new *Botrychium* sites are located in stands were there will be no treatment under the East Face project. There will be **no impact** on these four locations from project activities because none would occur. Anticipated project effects are described below under Environmental Consequences.

Table 8. Sensitive Plant Site Information

Site Name	Number of plants	GIS Acres	Proximity to Proposed Activities
06160310001 *Barbilophozia lycopodioides*	Unknown	0.076	No Impact – Anthony Lakes; there are no activities from the East Face project.
06160310007 *Barbilophozia lycopodioides*	Unknown	83.387	No Impact – No activities, South of Forest Service Road 73
0616010016 *Campylium stellatum*	Unknown	0.053	Grande Ronde Lake Recreation Site; Units: # 311 & # 312-within and on the edge of # 312, North of FSR 73 Road; 1850 Trail and near Trail 140
0616060020 *Helodium blandowii*	Unknown	0.357	South of Anthony Creek, Unit # 312
061631HYMI11__Hymi11 *Hydnotrya michaelis*	Unknown	0.434	Mud Lake; No Impact – No activities
0616060022 *Tomentypnum nitens*	Unknown	0.301	No Impact – No activities
0616010605 *Botrychium montanum*	35	0.066	No Impact – No activities
0616010627 *Botrychium montanum*	50	0.109	No Impact - No activities.
0616012105 *Botrychium montanum*	Unknown	1.066	No Impact – No activities
0616012107 *Botrychium montanum*	27	0.207	Unit # 307
0616012112 *Botrychium montanum*	10	0.302	Unit # 311; Along the 73 road
0616012212 *Botrychium montanum*	30	2.411	South edge of BB # 608; and additional habitat between BB # 608 and North edge of BB # 609 along Unit # 328
0616310036 B. pedunculosum	30	0.268	Along the 73 road and within Unit # 307
0616310040 B. pedunculosum	36	0.089	Along the 73 road; Unit # 146. ATP
0616010017 Utricularia minor	Unknown	0.721	No Impact; near Unit # 311 and south of # 139; No activities planned here

Site Name	Number of plants	GIS Acres	Proximity to Proposed Activities
Pinus albicaulis	Unknown	29.869 Acres documented	Whitebark pine is growing primarily in the southwest corner of the southern end of the project area boundary, along FSR 73 & 43 Roads (Units # 312, # 311 and #310. Both in and out (Southwest and south) of Project area and south of 73 Road. & 43 Roads. Pial is located within and out of Units, but is in project area boundaries.
BB # 610; Webfoot Creek, Sand Hill, High Summit Spring; High Mtn., and	In addition, there is highly suitable potential habitat for supporting sensitive *Botrychium* species within the project area near Units: 78, 120, 126, 128, 142		Highly suitable habitat for sensitive *Botrychium* species, with a high probability of occurrence was identified; often other Botrychium species growing there.

Species information (See also Table 7. for habitat information and Table 8. For known sites)

There will be no impact to the following five plants. They occupy a unique and specific habitat which is not conducive to project activities. (Refer to Table 7 for more habitat information; and Table 8 for known sites).

Campylium stellatum (Star compylium moss): Unable to locate habitat information for this species. No activities to be implemented at this location**. No Impact**

Helodium Blandowii (Blandow's feather/weland moss): Found within bogs and marshes; in mountain fens, usually with calcareous ground water. Sometimes under sedges or shrubs in mires. Bogs , fens, wet meadows, and streamside's. Shady sites to full sun. Wet boggy areas, seepage areas around alpine lakes.

Two sites are located in the geographic area of the project. One site is outside and adjacent to the west within the Tanner Gulch – Grande Ronde River – UGRR subwatershed. The other site is located at the Grande Ronde Lakes recreation site within the area boundary. There will be no activities associated with the East Face project at this location. **No Impact.**

Hydnotrya michaelis): Unable to locate habitat information for this species. No activities to be implemented at this location**. No Impact.**

Tomentypnum nitens (Tomentypnum moss) Swamps and bogs; elevated sites within mineral rich montane fens. Elevations range from 5000 to 6000 feet. Fens occur in openings in forest types that include *Abies amabilis, Abies concolor, Abies lasiocarpa,* and *Pinus contorta* ssp. *latifolia* associations. Species is located at one site within the Project area boundary. No activities will take place at or near this site. **No Impact.**

Utricularia minor (lesser bladderwort); Aquatic plant; located in ponds, lakes, slow moving streams; and wet sedge or rush meadows. Occurs in low-nutrient lakes and peat bogs. **No impact**

6. ENVIRONMENTAL CONSEQUENCE

This section addresses the anticipated project effects to the five sensitive plant species known to occur within the East Face Vegetation Management Project.

The no action and four action alternatives were developed and analyzed for the East Face

Vegetation Management Project.

Alternative one is the No Action alternative, no hand, mechanical or prescribed fire treatments would take place. There would be no change in the project area from proposed treatments as none would occur. Conditions would remain the same and there would be **no impact** to any listed or sensitive plant species.

Activities proposed under the four action alternatives would result in commercial harvest treatments, prescribed burn areas, precommercial thinning and post harvest treatments. Refer to the activity elements in the Environmental Analysis for more detail.

There is potential to impact sensitive plant species within the East Face project area as a result of proposed treatment activities. Activities most likely to impact sensitive plant locations include: ground-based yarding systems, commercial harvest treatments and road work including reconstruction and temporary road construction on both existing and new areas.

Mitigations: Project design features (PDF) have been incorporated into the action alternatives to minimize or eliminate deleterious impacts to TES plants or potential TES/native plant habitat. Known locations for sensitive plant species or habitat will be protected by designation of an "Area To Protect" (ATP) on all project and contract maps. Specific units are identified below.

East Face units - to be protected through designation of ATPs:
Timber Harvest Treatment Units (known *Botrychium* sites): 45, 55, 59, 98, 138, 139 and 146
Non-Commercial Treatment Units: 307, 308, 310, 311 312, and 328
Timber Harvest Treatment Units (*Botrychium* habitat): 60, 61, 62, 63, 82, 83, 84, 85, 89, and 112.
Temporary Roads : T-01, T-03, T-04, T–06, T-07, T-08, T-10, T-11 and T-13
Treatment Units (as identified above) within prescribed burn blocks: 608, 609, 610 and 611.

In addition, there is highly suitable potential habitat for supporting sensitive *Botrychium* species within the project area near Units: 78, 120, 126, 128, 142. Highly suitable habitat with a high probability of occurrence is considered to be occuppied and is included in the following discussion

REGION 6 - SENSITIVE PLANT SPECIES: (Species information and impacts/effects call)

Barbilophozia lycopodioides (**maple liverwort**): A short-lived, leafy liverwort with capsules that usually develop in early summer, depending on elevation. Forming mats on peaty soil on damp ledges of rock outcrops and cliffs at higher elevations. Sites receive abundant snowfall. Elevations of known sites in Oregon and Washington range from 3400 to 7500 feet. The species is circumboreal in the Pacific Northwest, south to Oregon and Idaho where restricted to high peaks.

Direct, Indirect and Cumulative Effects

Barbilophozia lycopodioides may be impacted by road and trail construction, and alteration of microclimate from adjacent logging. Removal of forest canopy surrounding rock outcrops may

influence microclimate that supports sensitive plant species. However, no activities will occur at or adjacent to the lake. There will be **No Impact** to this species from project activities.

Effects from climate change may be considered a component of cumulative impacts. However, it is impossible to know the mode, timing or extent of changes or magnitude of environmental responses at the project scale. Species most at risk of climate change are those with small geographic ranges, narrow phsiological tolerances, limited dispersal abilities, strong interspecific dependencies, low genetic diversity and those that have recently experienced population declines.

Determination and Conclusion

There will be **no impact** to this species from the East Face project activities. Locations will be designated as ATPs. Since impacts from project activities will not occur, cumulative impacts would not increase significantly.

Botrychium montanum **(Mountain moonwort**): *Botrychium montanum* is most commonly associated with areas of old growth and mesic soils. Dark, coniferous forests, usually near swamps and streams. Wet meadows, saturated soils. This species has a relatively narrow range of distribution from northern California northward through Oregon and Washington, to British Columbia and southeastern Alaska; and eastward through northern Idaho and northwestern Montana. **No Impact**.

Botrychium pedunculosum **(stalked moonwort):** *Botrychium pedunculosum* is found in brushy secondary growth along streams and roadsides. Montane to sub-alpine grasslands or forb dominated meadows; and openings of cold coniferous forests. *Botrychium pedunculosum* occurs in the Rocky Mountains from northeastern Oregon, northern Idaho and northwestern Montana northward to central British Columbia. It has disjunct occurrences in northeastern Quebec and in the Alaska peninsula. **No Impact.**

Direct, Indirect and Cumulative Effects for *Botrychium montanum* and *B. pedunculosum*:

Botrychium species are known from mesic areas that have limited potential to be directly impacted by vegetation management activities because riparian areas and other mesic features are protected by INFISH buffers. Prescribed burning has a low potential to impact these species as they burn quickly through the primary habitat where the species tend to survive in refugia from the fire.

Other possible actions within the analysis area such as fire suppression activities, road maintenance, and ongoing activities like recreation, fuelwood gathering and livestock grazing may have the potential to impact *Botrychium* populations and habitat. There will be **no impact** to these species as they will be designated as Areas to Protect.

Determination and Conclusion

There will be no **impact** to any documented sites for sensitive *Botrychium* species from the East Face project activities. All sites will be protected by an ATP on project maps. Since impacts from project activities will not occur there are no cumulative impacts.

Pinus albicaulis: Whitebark pine is a slow growing, very long-lived, medium tall tree (16 to 66 feet) adapted to steep slopes and windy exposures in subalpine and alpine habitat. It is often an early to mid-seral species, growing with lodgepole pine, Engelmann spruce and sub-alpine fir. In open areas above timberline, the trees tend to be multi-stemmed and spreading; taking on a krummholz (stunted, shrub-like) form.

Whitebark Pine was federally designated as a candidate species on July 19, 2011 as the species is declining throughout its range.

Direct, Indirect and Cumulative Effects

Pinus albicaulis has been identified for a thinning project and restoration treatment to remove competing vegetation and ladder fuels from around high-value, mature, cone-producing whitebark pines.

The current fire regime and fire management practices threaten this species due to the limited abundance of this species and weakened communities, such that othere factors create additional negative impacts to the species. When fire severity conditions are not extreme, there is potential to create desired conditions through planned or unplanned ignitions.

Determination and Conclusion

This project may impact individuals or habitat of *Pinus albicaulis*, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species (**MIIH**). Mature whitebark pine trees which will be protected from burning through slash removal and low intensity burns. Smaller diameter trees could be removed or negatively impacted through harvest and fire activities. Treatments within the whitebark pine stands may be **beneficial** in the long run as trees are less vulnerable to attacks from pathagens and are better able to compete with other dominant tree species.

6. SUMMARY AND CONCLUSION

Of the 25 plant species identified in the pre-field as documented on the forest and possibly occurring in the planning area, there will be **no impact** to eight of the nine currently listed (Dec 9, 2011) Region – 6 Sensitive Plant species known to occur, or discovered during sensitive plant surveys.

Table 6. Effects Call by Species EAST FACE

Scientific Name	Common Name	Effect call for East Face Project; Alternatives 1, 2, 3, 4 and 5
Barbilophozia lycopoidioides	**Maple leafwort**	No Impact - ATP
Botrychium montanum	**Mountain grape-fern**	No Impact - ATP
Botrychium pedunculosum	Stalked moonwart	
Campylium stellatum	**Star compylium moss**	No Activities / no impact
Helodium blandowii	**Blandow's feather/wetland moss**	No Activities / no impact
Hydnotrya michaelis	**unknown**	No Activities / no impact
Pinus albicaulis	**White bark pine**	MIIH / Beneficial
Tomentypnum nitens	**Tomentypnum moss**	No Activities / no impact
Utricularia minor	**Lesser bladderwort**	No Impact - ATP

Barbilophozia lycopodioides, *Botrychium montanum* and *Botrychium pedunculosum* have been located within the project area. There will be **no impact** to the previously discovered locations for sensitive *Botrychium* species; nor *Barbilophozia* as they will be designated as Areas-To-Protect under mitigations for project implementation.

There will be **no impact** to previously discovered locations for the star compylium moss, Blandow's feather/wetland moss, *Hydnotrya michaelis, Tomenytpum nituns* or *Utricularia minor*. These plants are primarily associated with aquatic and wetland habitats. No project activities are proposed at

these locations, which will be designated as Areas-To-Protect.

There **may be impacts to habitat** (MIIH) or to the coniferous species *Pinus albicaulis*, as the silviculture treatments for these stands are designed to restore and protect the species. Stands that are identified as having mature whitebark pine will be cleared around.

It is anticipated that the treatments will be **beneficial** to the species in the long run by reducing potential for competition and vulnerability to insects.

There are no known occurrences for any Threatened, Endangered or Proposed plant species. No plants or habitat were located during surveys within the project analysis area. There will be **no direct, indirect or cumulative effect** to any proposed, threatened, or endangered plant species from project implementation.

There will be **no impacts** to eight of the nine sensitive plant species documented for the East Face project area. All site locations will be designated as Areas To Protect. The project may imapct indiavidual plants or habitat but is not expected to result in a trend to listing.

CONSISTENCY with Federal Regulations and the Wallowa – Whitman Forest Plan

This project complies with present Federal Regulations (ESA) pertaining to the management of Threatened, Endangered and Sensitive plant species.

This project is consistent with the Land and Resource Management Plan for the Wallowa-Whitman National Forest.

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